

# Heart-to-Heart: Cardiovascular Events and Outcomes for Utah Residents With and Without Diabetes

## Utah Department of Health, Diabetes Prevention and Control Program

[www.health.utah.gov/diabetes](http://www.health.utah.gov/diabetes)

What are the variations in cardiovascular conditions between Utahns with and without diabetes?

### Methods

Three data sources were used to assess the broad spectrum of potential differences in cardiovascular conditions for Utahns with and without diabetes: Behavioral Risk Factor Surveillance System (BRFSS), Utah Inpatient Hospital Discharge Database, and Utah mortality records.

### Findings

#### CVD Risk Factors

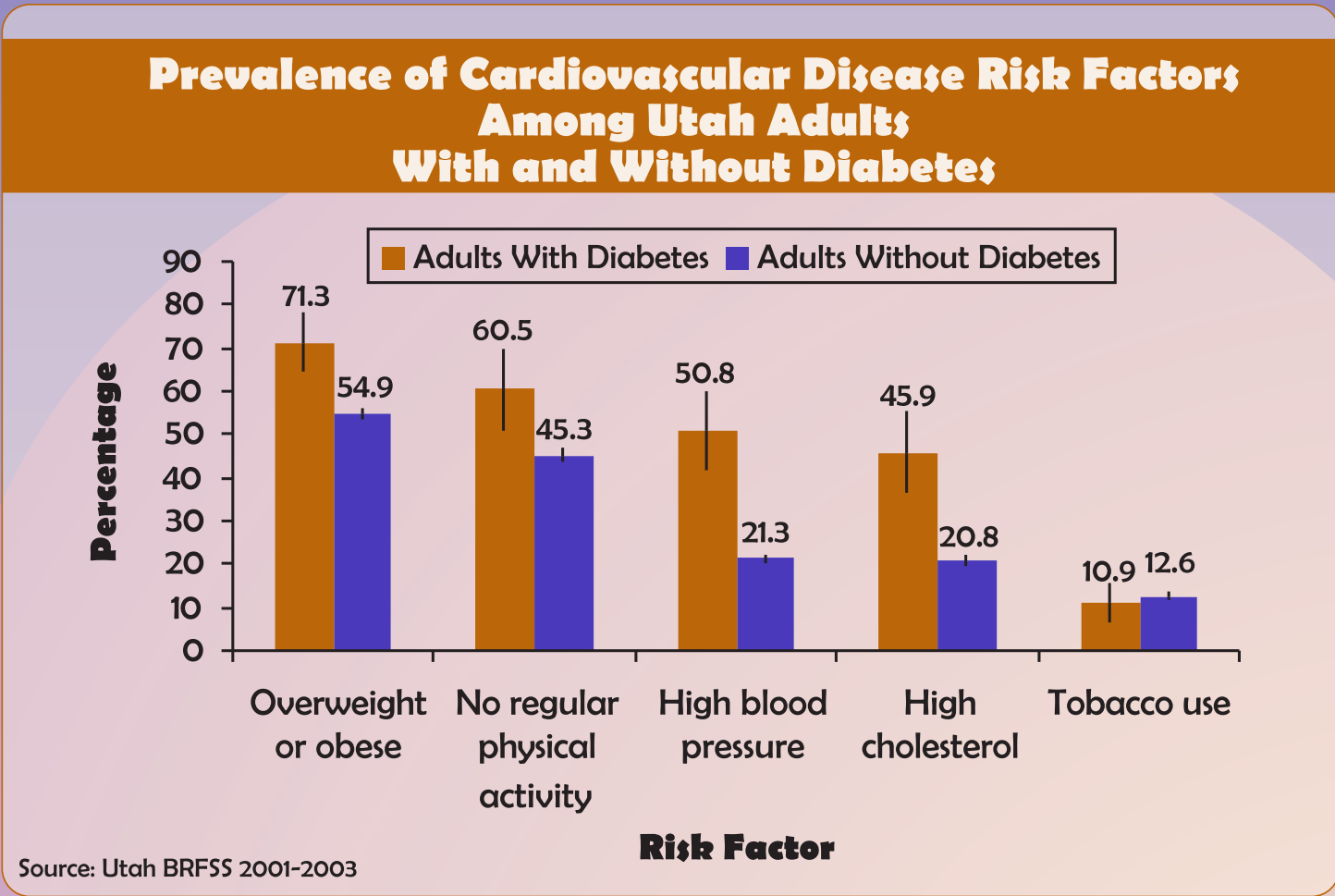
- Utah adults with diabetes have higher prevalence of every cardiovascular disease risk factor except tobacco use.
- The greatest difference in risk factors is high blood pressure. Prevalence is 150 percent higher for Utah adults with diabetes than for those without diabetes.

#### Hospitalizations

- Utahns with diabetes are more than twice as likely as Utahns without diabetes to be hospitalized for any type of cardiovascular condition.
- There was little difference in the median charge or length of stay per hospital discharge for patients with or without diabetes.
- Approximately one-fourth of all discharges listing cardiovascular disease as the primary diagnosis also list diabetes as a contributing diagnosis.

#### Mortality

- Nearly three-fourths (72.9%) of deaths for Utahns with diabetes list cardiovascular disease as an underlying or contributing cause of death compared to 46.0% of Utahns without diabetes.

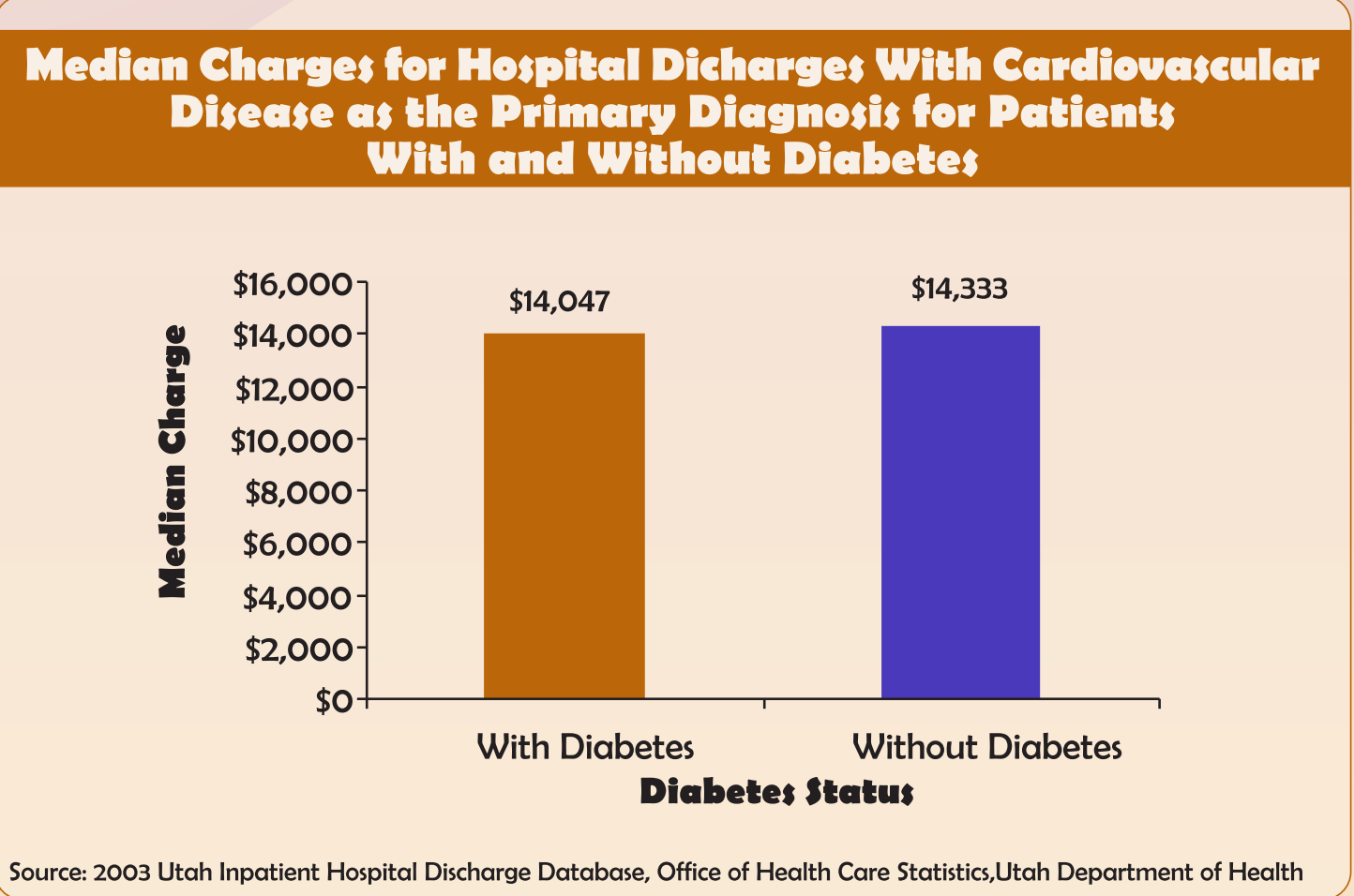
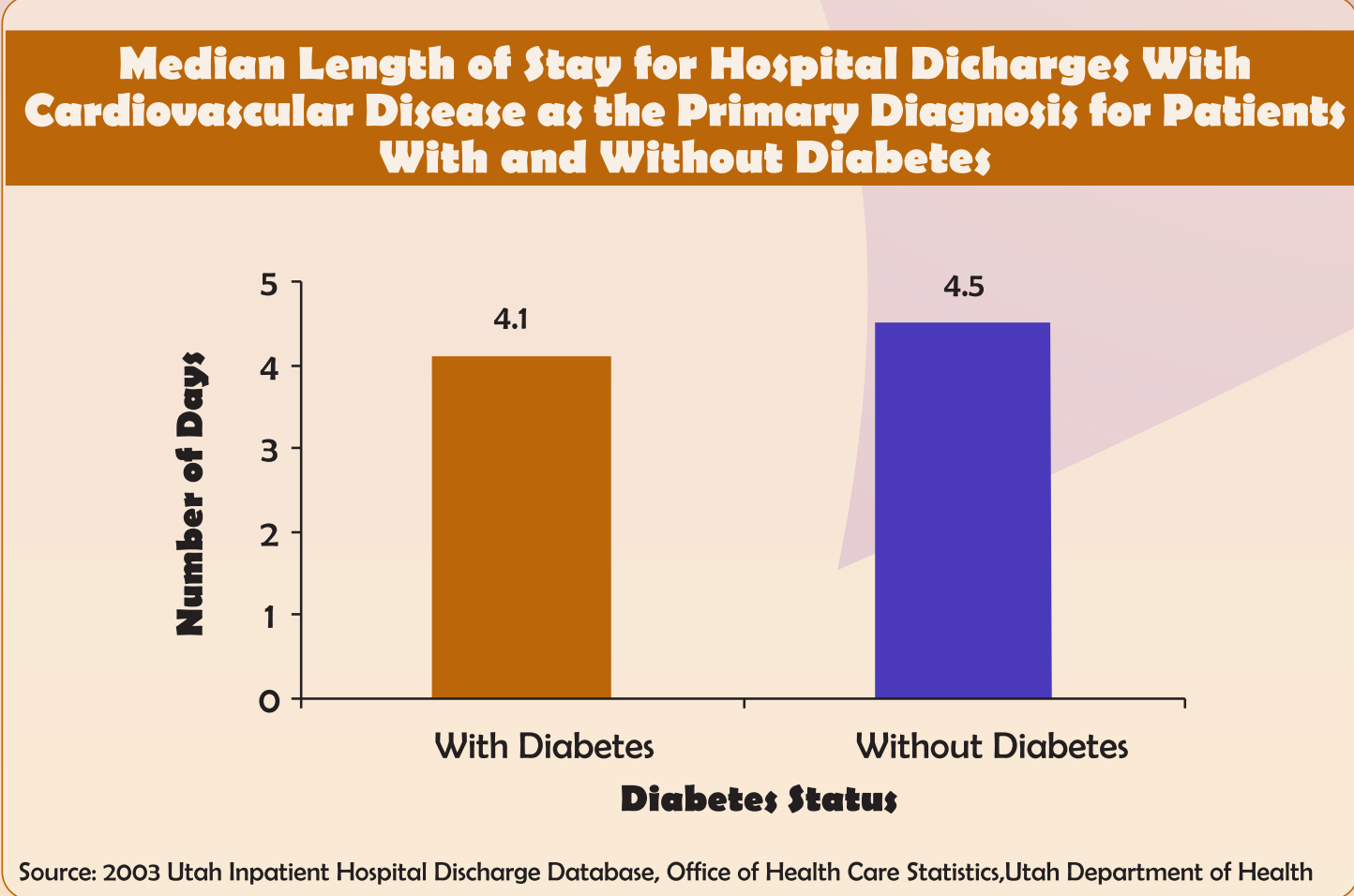
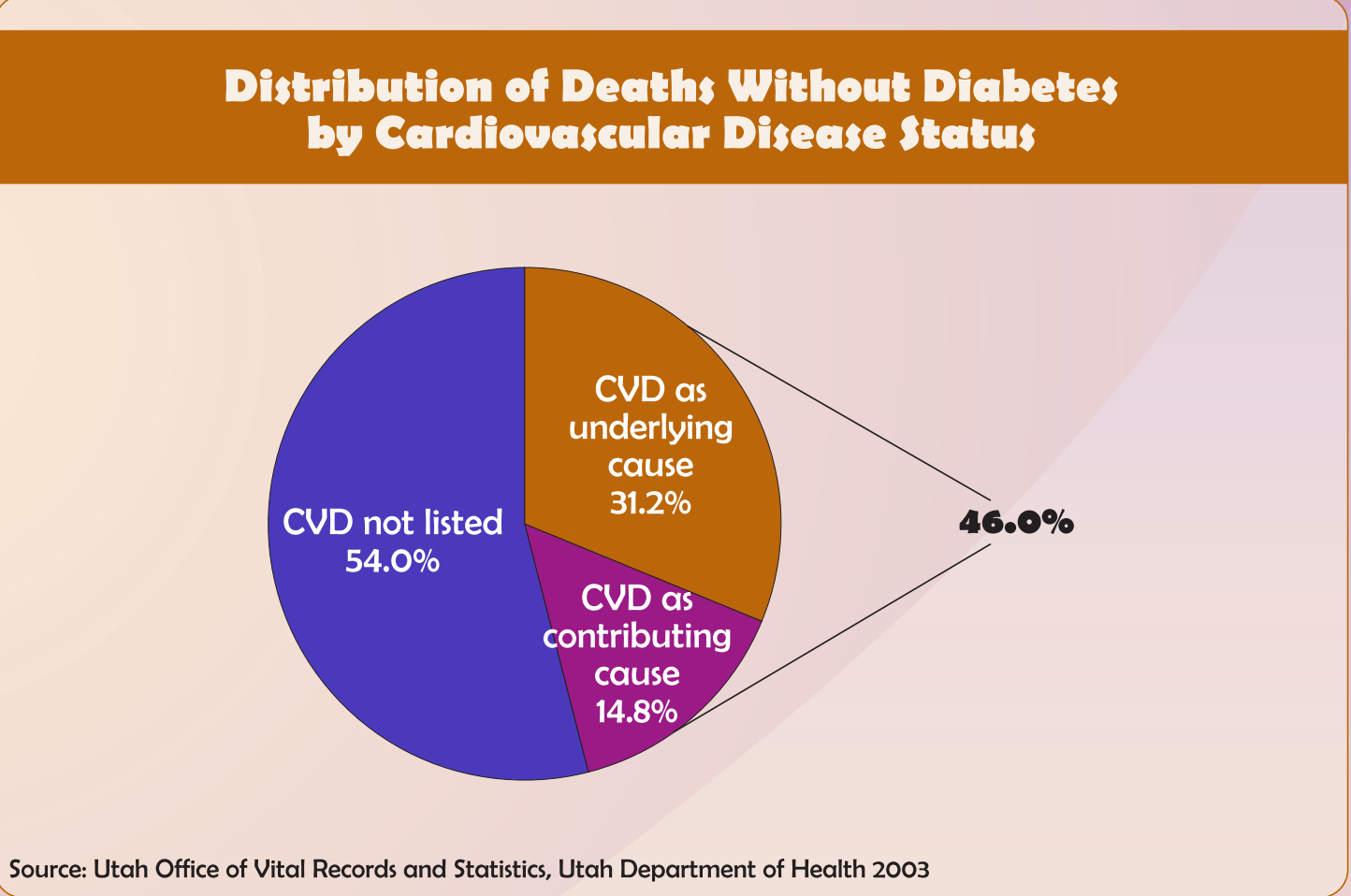
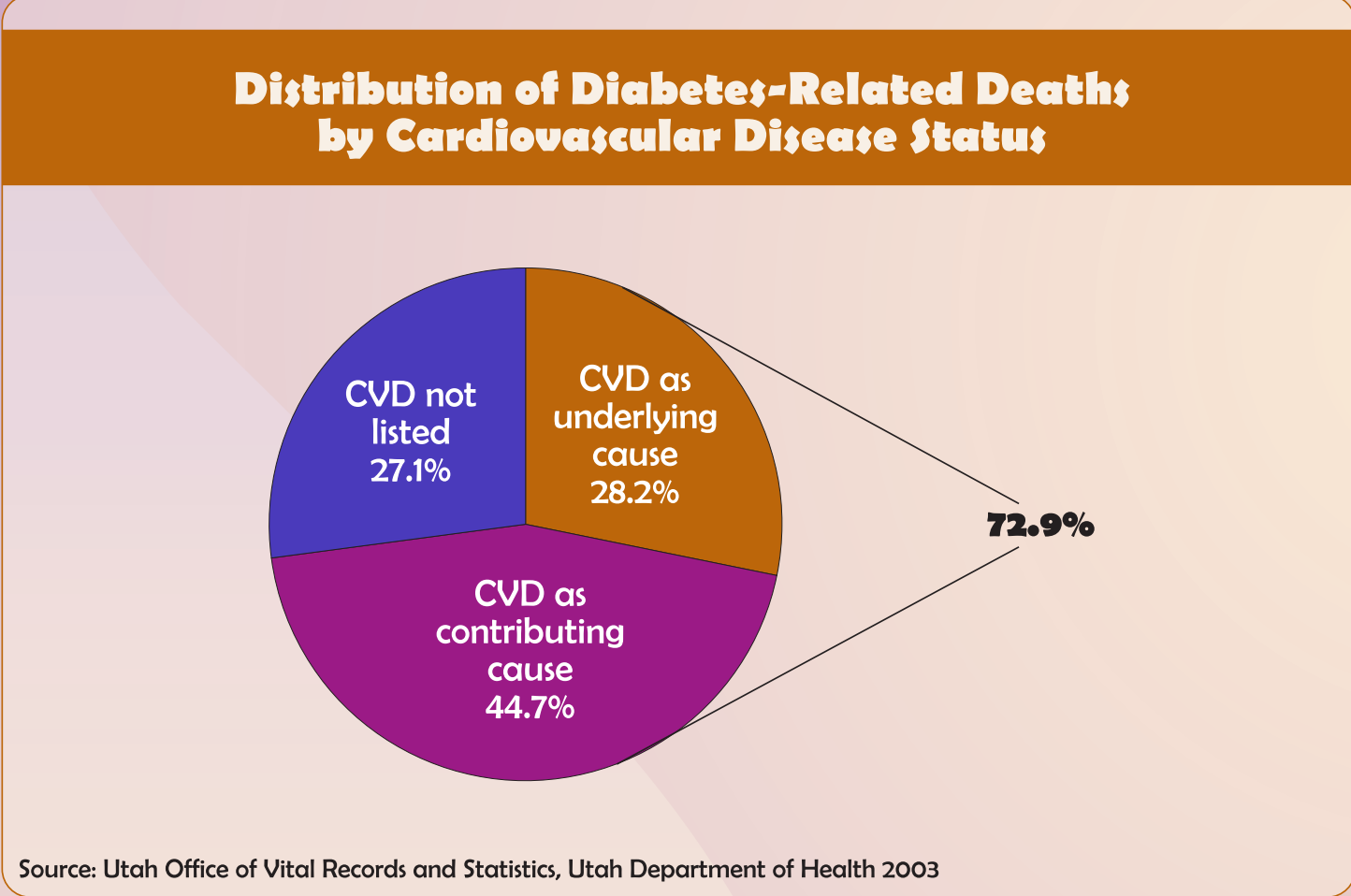


**Age-Adjusted Hospital Discharge Rates for Cardiovascular Conditions as Primary Diagnosis for Utahns With and Without Diabetes**

Cardiovascular Condition	Discharge Rate per 10,000 Utahns With Diabetes	Discharge Rate per 10,000 Utahns Without Diabetes	Ratio of Discharge for Cardiovascular Conditions for Utahns With Diabetes to Utahns Without Diabetes
Any Cardiovascular Condition	271.4	104.2	2.6
Myocardial Infarction	37.4	14.4	2.6
Coronary Heart Disease	111.1	37.4	3.0
Congestive Heart Failure	51.3	13.9	3.7
Stroke	37.6	18.0	2.1

Source: 2003 Utah Inpatient Hospital Discharge Database, Office of Health Care Statistics, Utah Department of Health

Any Cardiovascular Condition ICD-9 Codes: 390-448  
Myocardial Infarction ICD-9 Codes: 410  
Coronary Heart Disease ICD-9 Codes: 402, 410-414, 429.2  
Congestive Heart Failure ICD-9 Codes: 428.0, 428.1, 428.9  
Stroke ICD-9 Codes: 430-438



### Conclusions

- Utahns with diabetes exhibit higher prevalence of cardiovascular risk factors.
- In Utah, the higher hospital costs for people with diabetes lie in the excessive rate of admission rather than increased charges per stay.
- In Utah, a higher percentage of diabetes-related deaths list cardiovascular disease as an underlying or contributing cause than deaths that were not diabetes related.
- Efforts to reduce the excess prevalence of cardiovascular risk factors among people with diabetes will help to reduce excess hospitalizations and cardiovascular mortality.

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